

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-6 (canceled).

7. (currently amended): A method of producing a material for heat dissipation substrate for mounting a semiconductor chip, comprising the steps of:

press-forming molybdenum powder having an average particle size of [2-5] 2-4μm at a pressure of 100-200 MPa to obtain a molybdenum powder compact;

impregnating melted copper into a void between powder particles of the molybdenum powder compact in a nonoxidizing atmosphere at 1200-1300°C to obtain a composite of molybdenum and copper which contains 70-60% molybdenum in weight ratio, the balance copper;

primary rolling the composite in one direction as a first rolling direction at a temperature of 100-300°C and at a working rate of 50% or more;

secondary rolling the composite as cold rolling in a direction intersecting with the one direction as a second rolling direction at a working rate of 50% or more after the step of primary rolling,

wherein a total working rate is 75% or more when primary rolling and secondary rolling so as to produce a rolled composite of molybdenum and copper which has an isotropic coefficient of linear expansion in the first and the second rolling direction.

8. (currently amended): A method as claimed in claim 7, wherein each of said steps of primary and secondary rolling is repeatedly carried out [alternatingly repeatedly] so as to extend particles of molybdenum contained in the composite to the first and the second rolling directions and form the particles into a flat shape.

9. (previously presented): A method as claimed in claim 7, further comprising the step of press-bonding copper plates to both surfaces of the rolled composite to obtain a substrate for a semiconductor-mounting heat dissipation substrate having a copper-clad.

10. (currently amended): A method as claimed in claim 9, wherein said steps of primary rolling and secondary rolling the copper-molybdenum composite as an intermediate layer [is] are carried out with the ratio of copper and molybdenum and a reduction percentage controlled so that a resultant rolled composite has a coefficient of linear expansion, and thereafter the step of press-bonding copper on both surfaces of the rolled composite is carried out to obtain a copper-clad rolled composite having a layer ratio of 1:4:1 of Cu/ Cu-Mo composite/ Cu [controlled coefficient of linear expansion].

11. (currently amended): A method as claimed in claim [9] 7, wherein said [step] steps of primary rolling and the secondary rolling the copper-molybdenum composite as an intermediate layer is carried out with the ratio of copper and molybdenum and a reduction percentage controlled so that a resultant rolled composite has a controlled coefficient of linear expansion, and thereafter said step of press bonding copper on both surfaces of the copper-molybdenum composite is repeatedly carried out at a reduction ratio of 10% or less to obtain a copper-clad rolled composite [having a layer ratio controlled coefficient of linear expansion].

12. (currently amended): A method of producing ceramic package, comprising:
press-forming molybdenum powder having an average particle size of [2-5] 2-4μm at a pressure of 100-200 MPa to obtain a molybdenum powder compact;

impregnating melted copper into a void between powder particles of the molybdenum powder compact in a nonoxidizing atmosphere at 1200-1300°C to obtain a copper-molybdenum composite containing 70-60% molybdenum in weight ratio, the balance copper; and

primary rolling the composite in one direction as a first rolling direction at a temperature of 100-300°C and at a working rate of 50% or more;

secondary rolling the composite as cold rolling in a direction intersecting with the one direction as a second rolling direction at a working rate of 50% or more after the step of primary rolling;

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press-bonding copper plates to both surfaces of the rolled composite to obtain a copper-clad rolled composite [having a coefficient of linear expansion of $9.0 \times 10^{-6}/K$ or less at a temperature of 30-800°C]; and

directly brazing the copper-clad rolled composite with ceramic having a metal layer affixed to a surface of the ceramic.

Claims 13-14. (canceled).